

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A substrate for attaching an array of biological or chemical analytes, said substrate comprises:

- a) a porous inorganic layer, derived from individual particles;
- b) said porous inorganic layer having a plurality of interconnected voids of a predetermined mean size dispersed therethrough, and having void channels that extend through to an exposed surface of said porous inorganic layer;
- c) a glass interlayer which has a softening point that is lower than a softening point of the individual particles used to derive said porous inorganic layer; and
- d) a flat, rigid, non-porous, inorganic understructure, wherein said glass interlayer is disposed between said porous inorganic layer and said flat, rigid, non-porous, inorganic understructure, the porous inorganic layer, the glass interlayer, and the flat, rigid, non-porous, inorganic understructure have matching coefficients-of-thermal expansion.

2. (Previously Presented) The substrate according to claim 1, further comprising a uniform coating of a binding agent over at least a part of a surface area of said void channels and said exposed surface of said porous inorganic layer.

Claim 3. (Canceled)

4. (Previously Presented) The substrate according to claim 2, wherein said binding agent is gamma-aminopropylsilane.

Claims 5-8. (Canceled)

9. (Previously Presented) The substrate according to claim 1, wherein said porous inorganic layer is a material that is transparent to light.

Claims 10-12. (Canceled)

13. (Previously Presented) The substrate according to claim 1, wherein said porous inorganic layer has a thickness of about 5 μm .

14. (Previously Presented) The substrate according to claim 1, wherein said particles have a predetermined mean size in the range of about 3.5 μm .

Claim 15. (Canceled)

16. (Previously Presented) The substrate according to claim 1, wherein said voids have a predetermined mean size in the range of about 0.3 μm to about 20 μm .

Claims 17-19. (Canceled)

20. (Original) The substrate according to claim 1, wherein said porous inorganic layer is characterized as having a microstructure that produces a sensitivity of fluorescent molecules of at least one order of magnitude greater than that of a comparable, non-porous substrate.

21. (Original) The substrate according to claim 1, wherein said porous inorganic layer has a microstructure derived from at least a partial sintering of said individual particles.

Claims 22.-37. (Canceled)

38. (Previously Presented) A substrate for attaching an array of biological or chemical analytes, said substrate comprises:

- a) a flat, rigid, non-porous, inorganic understructure;
- b) a tape-casted porous inorganic layer, derived from individual particles, adhered to said flat, rigid, non-porous, inorganic understructure; and
- c) said tape-casted porous inorganic layer having a plurality of interconnected voids of a predetermined mean size dispersed therethrough, and having void channels that extend through to an exposed surface of said tape-casted porous inorganic layer.

39. (Currently Amended) The substrate according to claim 38, further comprising a tape-casted glass interlayer disposed between said tape-casted porous inorganic layer and said flat, rigid, non-porous, inorganic understructure, the tape-casted porous inorganic layer, the tape-casted glass interlayer, and the flat, rigid, non-porous, inorganic understructure have matching coefficients-of-thermal expansion.